

WHAT YOU NEED TO KNOW ABOUT CO

WHAT IS CO?
CO is an invisible, odorless, tasteless gas produced when fossil fuels do not burn completely. CO is also exposed to heat (usually fire). Electrical appliances typically produce CO.

These fuels include: Wood, coal, charcoal, oil, natural gas, gasoline, kerosene, and propane.

Common appliances are often sources of CO. If they are not properly maintained, are improperly ventilated, or malfunction, CO levels can rise quickly. CO is a real danger now that homes are more energy efficient. "Airtight" homes with added insulation, sealed windows, and other weatherproofing can trap CO inside.

SYMPTOMS OF CO POISONING

These symptoms are related to CO POISONING and should be discussed with ALL household members.

Mild Exposure: Slight headache, nausea, vomiting, fatigue ("flu-like" symptoms), Extreme Exposure: Convulsions, unconsciousness, fast heart rate.

Exposure to Carbon Monoxide can cause brain damage, death.

IMPORTANT!

This CO Alarm may expose to CO over time. It alarms if CO levels are high in a short period of time, or if CO levels reach a certain minimum over a long period of time. The CO Alarm generally sounds an alarm before the onset of symptoms in average, healthy adults. Why is this important? Because you need to be warned of a potential CO problem while you are still healthy. If you are not healthy, you may not even realize that you are not feeling well, but become disoriented and can no longer react well enough to exit the building or get help. Also, young children and pets may be the first affected. The average healthy adult might not feel any symptoms with CO Alarm. However, people with medical or respiratory problems, infants, unborn babies, pregnant mothers, or elderly people can be more quickly and severely affected by CO. If you experience even mild symptoms of CO poisoning, consult your doctor immediately!

FINDING THE SOURCE OF CO AFTER AN ALARM

Carbon monoxide is an odorless, invisible gas, which often makes it difficult to locate the source of CO after an alarm. These are a few of the factors that can make it difficult to locate the source of CO:

- High heat ventilation and/or heat exchanger.
- Problem caused by "backdrafting".
- Transient CO problem caused by special circumstances.

Because CO may dissipate by the time an investigator arrives, it may be difficult to locate the source of CO. BRK Brands, Inc. shall not be obligated to pay for any carbon monoxide investigation or service call.

POTENTIAL SOURCES OF CO IN THE HOME

Fuel-burning appliances like: portable heater, gas or wood burning stove, fireplace, gas clothes dryer, Damaged or insufficient venting: corroded or disconnected water heater vent pipe, leaking chimney pipe or flue, cracked or blocked or clogged chimney opening. Improper use of appliance/device: operating a barbecue grill or vehicle in an enclosed area (like a garage or screened porch).

Transient CO Problems: "transient" or on-and-off again CO problems can be caused by certain conditions and other special circumstances.

The following conditions can result in transient CO situations:

1. Excessive spillage or reverse venting of fuel appliances caused by outdoor conditions such as:
 - Wind direction and/or velocity, including high, gusty winds. Heavy air in the vent pipes (cold/humid air with extended periods between cycles).
 - Negative pressure differential resulting from the use of exhaust fans.
 - Some appliances running at the same time competing for limited fresh air.
 - Vent pipe connections vibrating loose from clothes dryers, furnaces, or water heaters.
 - Obstructions in or unconventional vent pipe designs which can amplify the above situations.
2. Extended operation of vented fuel burning devices (range, oven, fireplace).
3. Transient inversions, which can trap exhaust close to the ground.
4. Car idling in an open or closed attached garage, or near a home. These conditions are dangerous because they can trap exhaust in your home. Since these conditions can come and go, they are also hard to recreate during a CO investigation.

HOW CAN I PROTECT MY FAMILY FROM CO POISONING?

A CO Alarm is an excellent means of protection. It monitors the air and sounds an alarm before Carbon Monoxide levels become threatening for average, healthy adults.

A CO Alarm is not a substitute for proper maintenance of home appliances. To help prevent CO problems and reduce the risk of CO poisoning:

- Clean chimneys and flues yearly. Keep them free of debris, leaves, and nests for fuel or air flow.
- Have a professional check for rust and cracks in pipe separations. These conditions can prevent proper air movement and cause backdrafting. Never "cap" or cover a chimney in any way that would block air flow.
- Test and maintain all fuel-burning equipment annually. Many local gas or oil companies and HVAC companies offer appliance inspections for a nominal fee.
- Make regular visual inspections of all fuel-burning appliances. Check for excessive rust and scaling. Also check the flame on the burner and pilot lights. The flame should be blue. A yellow flame means fuel is not burning completely and CO may be present.
- Keep the CO alarm on the door or window. Use extra fans when they are available on all fuel-burning appliances. Make sure appliances are vented to the outside. Do not grill or barbecue indoors, or in garages or on screen porches.
- Check for exhaust backflow from CO sources. Check the draft hood on an operating furnace for a backdraft. Look for cracks on furnace heat exchanger.
- Check the house garage on the other side of shared wall.
- Keep windows and doors open slightly. If you suspect that CO is escaping from your home, open a window or a door. Opening windows and doors significantly decreases CO levels.

In addition, familiarize yourself with all enclosed manuals. Read this manual in its entirety, and make sure you understand what to do if your CO Alarm sounds.

REGULATORY INFORMATION FOR SMOKE/CO ALARMS

REGULATORY INFORMATION FOR CO ALARMS

WHAT LEVELS OF CO CAN CAUSE AN ALARM?

Underwriters Laboratories Inc. Standard UL2034 requires residential CO Alarms to sound when exposed to levels of CO and exposure times as described below. They are measured in parts per million (ppm) of CO over time (in minutes) and are as follows:

UL2034 Required Alarm Points*:

- If the alarm is exposed to 400 ppm of CO, IT MUST ALARM BETWEEN 4 and 15 MINUTES.
- If the alarm is exposed to 150 ppm of CO, IT MUST ALARM BETWEEN 10 and 20 MINUTES.
- If the alarm is exposed to 70 ppm of CO, IT MUST ALARM BETWEEN 60 and 240 MINUTES.

* Approximately 10% COH₄ exposure at levels of 10% to 95% Relative Humidity (RH).

The unit is designed not to alarm when exposed to a constant level of 30 ppm for days.

IMPORTANT! CO Alarms are designed to alarm before there is an immediate life threat. Since you cannot see or smell CO, never assume it's not present.

• An exposure to 100 ppm of CO for 20 minutes may not affect average, healthy adults, but after 4 hours the same level may cause headaches.

• An exposure to 500 ppm of CO for 10 minutes may cause dizziness, headache after 30 minutes, but can cause death after 2 hours.

Standard Underwriters Laboratories Inc. Single and Multiple Station carbon monoxide alarms UL2034.

According to Underwriters Laboratories Inc. Section 1-1.2: "Carbon monoxide alarms cover all requirements for CO alarms, but not limitations to the protection from CO alarms from power sources, such as internal-combustion engines, abnormal operation of fuel-fired appliances, and replaces. CO Alarms are intended to alarm at carbon monoxide levels below those that could cause a loss of ability to react to the dangers of Carbon Monoxide. CO Alarms are not intended to alarm at levels that are designed to alarm before CO levels become life threatening. This allows you precious time to leave the house and correct the problem. This is only possible if CO alarms are located, installed, and maintained as described in this manual.

If CO alarms are located, installed, and maintained as described in this manual, the CO alarm will respond to the CO levels that are present, and not the CO levels that are present in the room or space where the CO alarm is located.

The warranty does not cover removal of parts or damage resulting from any of the following: negligent use or misuse of the product, use on improper voltage or current, use contrary to the operating instructions, disassembly, repair or alteration by anyone other than BRK or an authorized service center. Further, the warranty does not cover damage to the CO alarm, which is not caused by an incident or consequential damages.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the CO alarm at 500 ppm.

• If the CO alarm is exposed to 500 ppm of CO for 10 minutes, the CO alarm will not sound. It is impossible to sound the